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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,907	12/26/2001	Yun-Ho Jung	8733.565.00	7489
30827	7590	04/12/2004	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			PADGETT, MARIANNE L	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 04/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/025,907

Applicant(s)

JUNG, YUN-HO

Examiner

Marianne L. Padgett

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Applicant's election without traverse of Group I method claims 5-14 in Paper No. 1/20/04 is acknowledged.

2. Applicant's amendments have corrected the problem objected in claim 13 (and like phrasing in claim 7), as well as correcting the ambiguous phasing in claim 5, and defining what SLS does in claims 5, but no such effects are defined in the claim sequence where claim 11 is the independent claim, since no general definition for the case as whole was provided.

Also, in lines 6-7 of claim 5, while not formally incorrect, does applicant readily mean "the mask controlling fine movement of the mask" (emphasis added) as claimed, or is there a missing word, such as --stage-- before "controlling"?

3. Claims 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As discussed in section 6 of paper mailed 11/14/03, the scope encompassed by sequential lateral solidification or SLS is unclear in claim 11. The effect of SLS has been defined in the other independent claim 5 by the amendment, but claims 11 is a new sequence and does not benefit from the limitations of claims 5.

4. Further related applications/patents of interest, where Yun-Ho Jung is an inventor include 10/454,679 which has related laser irradiation steps to crystallize  $\alpha$ -Si, but has masking details not required by the present claims; Patents 6,514,339 B1; 6,537,863 B1 and 6,326,286 B1 all concern related SLS crystallization techniques, with generally broader claims, except (339) employs a "vacuum chuck"; (863) requires the laser beam to have a specific elongated energy profile, and (286) to Park et al uses "chevron shaped" lines instead of "slits" for mask or beam shape.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Im (6,368,954) as applied and discussed in section 11 of the paper mailed 11/14/03.

Applicants argue for the differentiation of their claims from Im, as they allege “while Im may teach moving either the masking system 150 or the sample stage 180, it does not teach a method where both are moved as part of the crystallization process” (p. 7, bottom of 1/20/04 response). Applicant’s conclusions about Im are not agreed with. For example, IM ’s Fig 8 explicitly shows movement of both mask and stage in initial steps 1010 and 1015, with steps 1040, 1045, 1655 and 1066 also referring to translation of sample stage movement. Note movement of mask to “initial position” implies later movement is intended. This is further supported by previously cited col. 4, lines 38-49 that teach “the continuous motion SLS which may utilizes the system described above. In particular, the computer 100 controls the motion (in planar X-Y direction) of the sample translation stage 180 and/or the movement of the masking system 150” (emphasis added), which provide explicit teachings that both movement techniques can be employed in the same crystallization procedure, refuting applicant’s allegation.

7. Other new art of interest including Sposili et al (2004/0053450 A1), which has teachings relating to Im and Im et al; Voutsas (6,686,978 B2) with SLS teaching where both stage 17 and mask 18 are capable of x-y movement; and the publications to Yamazaki et al (2003/0215973 A1 & 2003/0235971 A1) which discuss SLS techniques, blocks of crystallization and types of movement uses to produce them.

8. Applicant's arguments filed 1/20/04 and discussed above have been fully considered but they are not persuasive.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marianne L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on M-F from about 8:30 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck, can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. L. Padgett /af  
April 06, 2004  
April 07, 2004

A handwritten signature in black ink, appearing to read "Marianne Padgett", written in a cursive style.

**MARIANNE PADGETT  
PRIMARY EXAMINER**